

Montreal Protocol

Key Points

OVERARCHING THEMES

The Montreal Protocol, Exemplifying Successful Collaboration:

- Imagine a problem that the entire world comes together to solve. Imagine a solution that is based on global collaboration and partnerships between government, industry, and environmental organizations—and costs much less than expected. This has actually been the case with the nearly-universal commitment to the Montreal Protocol, widely considered one of the most successful environmental treaties of all time. Only our continued, combined efforts will completely heal the ozone layer, and a continued commitment to the Montreal Protocol will help make this happen.
- September 16, 2007, marks the 20th anniversary of the signing of the Montreal Protocol on Substances that Deplete the Ozone Layer, the international agreement to restore the ozone layer and protect future generations from the harmful effects of ultraviolet (UV) radiation.
- Twenty years ago, 24 nations signed the ambitious international treaty to freeze production of substances responsible for ozone depletion, such as chlorofluorocarbons (CFCs) in aerosol sprays and in refrigeration products. Today, 191 countries have signed the Montreal Protocol, and each country has measurable goals and actions for achieving success.
- The depletion of the ozone contributes to an increased amount of UV radiation reaching the Earth's surface. Overexposure to UV radiation causes a wide range of health problems for humans, especially skin damage, as well as other ecological and economic impacts. A future with a repaired ozone layer is a future where skin cancer will be less prevalent.
- While the ozone layer is under repair, it is even more important to practice sun-safe behavior, following the action steps in the U.S. Environmental Protection Agency's (EPA's) SunWise program and checking the UV Index to better plan outdoor activities.
- The 20th Anniversary of the Montreal Protocol marks the first and most successful collaboration between governments, industry, and environmental organizations to protect the Earth's ozone. The Montreal Protocol has also created a collaborative and successful framework for the future. This anniversary is a cause for celebration and a call to action to continue the world's collaboration on this important issue.

SUPPORTING POINTS

What is the issue?

The ozone layer acts like a shield to protect us from harmful UV radiation. Certain man-made chemicals, such as CFCs, halons, carbon tetrachloride, and methyl chloroform, deplete the ozone layer.

In 1985, scientists observed a thinning of the ozone layer over Antarctica, and people began speaking of this as an “ozone hole,” which continued to grow in succeeding years. Public and scientific focus on the ozone hole mobilized vital policy creativity when leaders from many countries came together in 1987 to sign the *Montreal Protocol on Substances that Deplete the Ozone Layer*.

In the last decade, the ozone layer has begun to recover, and full recovery is predicted for the middle of this century – assuming a continued worldwide commitment to the phase-out of ozone-depleting substances. Much progress has been made, and more needs to be done.

What is the U.S. Doing About it?

The U.S. has already used flexible and innovative strategies to stop making many of the chemicals with the greatest potential to deplete the ozone layer. The U.S. EPA is responsible for upholding the U.S. commitment to control of ozone-depleting substances, and the U.S. has met or exceeded all of its phase-out commitments with the help of many partners.

EPA has approved more than 300 alternatives to ozone-depleting substances for industrial, commercial, and consumer uses. Because many of the ozone-depleting chemicals also are greenhouse gases, ending the use of ozone-depleting substances in many cases protects not just the ozone layer but also the Earth's climate system.

Additionally, EPA launched the SunWise program in 2000 to teach children simple steps to protect themselves from overexposure to the sun's UV rays. More than 15,000 U.S. schools and more than 2,000 partner organizations are now registered to teach the SunWise Program; SunWise is helping make sun safety second-nature for a generation of children and adults.

September 16, 2007, marks the 20th Anniversary of the signing of the Montreal Protocol. EPA and other organizations are planning a number of activities, including a Best of the Best Awards and Gala Celebration Event with officials in Montreal, Canada, on September 19, to commemorate the important achievements of the people and programs that work to protect the Earth's ozone layer and to appeal to all parties about the work that remains to be done.

What Does EPA Plan to Do in the Future?

To realize a future with a healed ozone layer, the world community must continue its commitment to control and ultimately do without the chemicals that deplete ozone.

To continue the recovery of the ozone layer, EPA plans to:

- Continue to meet its responsibilities under the Montreal Protocol to control and eliminate ozone-depleting substances;
- Foster domestic and international partnerships to protect the ozone layer; and
- Encourage the development of products, technologies and initiatives that are ozone-safe and that also provide climate and energy efficiency benefits.

STATISTICS

Montreal Protocol Supporting Points

- Phasing out ozone-depleting substances has already reduced greenhouse gas emissions by more than 8,900 million metric tons of carbon equivalent (MMTCE) per year – equivalent to the cumulative carbon dioxide emissions associated with:
 - Generating enough electricity to power every U.S. home for more than 13 years;
 - Preserving 89 million acres of forests from deforestation – more than twice the size of Florida; and
 - Saving more than 1.2 trillion gallons of gas—enough to make 4.8 billion roundtrips from New York to Los Angeles by car.
- By the year 2165, actions to protect and restore the ozone layer will save an estimated 6.3 million U.S. lives that would have otherwise been lost to skin cancer.
- Efforts to protect the stratospheric ozone layer will produce an estimated 4.2 trillion dollars in societal health benefits in the U.S. over the period 1990 to 2165.

Call to Action for the General Public Regarding the Ozone and MP:

- Consumers will continue to play an important role in the success of the Montreal Protocol and the future efforts to protect the ozone layer. Consumers can help save the ozone layer by:
 - Getting professional vehicle service at shops that use recycling equipment and have leaking systems repaired (recycling and leak repair help to conserve refrigerants and limit the release of the chemicals to the environment);
 - Buying energy-efficient refrigerators and cleaning the coils to lengthen their lifespan;
 - Disposing of old appliances containing refrigerant responsibly; and
 - Visiting <http://www.epa.gov/ozone/strathome.html> for more information on ozone layer depletion.

Skin Cancer Supporting Points

Skin cancer is the most common form of cancer in the U.S., accounting for nearly half of all newly diagnosed cancers each year. It is also one of the most preventable forms of cancer, which makes the fact that one American dies every hour from skin cancer all the more tragic.

- The most fatal form of skin cancer, melanoma, is the number one killer of young women ages 25-29.
- The percentage of women under age 40 with basal cell carcinoma has tripled in the last 30 years, while their rate of squamous cell cancer has increased four-fold.
- One in five Americans will develop skin cancer in their lifetime.
- While melanoma is uncommon in African Americans, Latinos, and Asians, it is most deadly for these populations because it is more likely to go undetected.
- The cost of melanoma in the U.S. is more than \$740 million annually.
- Skin cancer is the #1 cancer in men over age 50, ahead of prostate, lung and colon cancer.

Call to Action for the General Public Regarding Sun Safety and SunWise:

As long as we continue to live in a world with a compromised ozone layer, it is particularly important to remember to practice sun safety. Developed by the National Weather Service and EPA, the UV Index is issued daily in select cities across the U.S. You can sign up to receive free UV forecasts and alerts by email at: www.epa.gov/sunwise/uvindex.html

Remember to wear protective clothing, such as a long-sleeved shirt, pants, a wide-brimmed hat, and sunglasses, when possible; seek shade; generously apply sunscreen and reapply it every two hours; and avoid burning, tanning, and tanning beds. For more information about sun safety, please visit: www.epa.gov/sunwise.